



CITY OF FARMINGTON

800 Municipal Drive
Farmington, NM 87401-2663
Phone: (505) 599-1308
Fax: (505) 599-1299
www.fmntn.org

January 22, 2016

Rec'd
1/27/16

Ms. Dorothy Brown, 6WQ-NP
U. S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

RE: City of Farmington Wastewater Treatment Plant
Permit Renewal Application, Permit No. NM0020583

Dear Ms. Brown:

Representatives from the City of Farmington, NM met in Dallas, TX on October 29, 2015 with U.S. Environmental Protection Agency (EPA) Region 6 personnel from the NPDES Enforcement and Permitting divisions to discuss the City's permit renewal with regards to permit limits on Total Dissolved Solids (TDS). The City respectfully requests relief in the new permit for TDS limits as specified in Appendix B of the October 2014 Review of the Water Quality Standards for Salinity by the Colorado River Basin Salinity Control Forum. At the conclusion of the meeting, it was decided that the City would submit an addendum to the permit application. This letter serves as the requested addendum.

In its permit application dated April 9, 2015, the City requested a TDS permit limit incremental increase of 725 mg/L over the TDS concentration in the intake water to the water treatment plant. This value was based upon the limits granted to four other municipalities in the Colorado River System as allowed in Appendix B.II.A of the aforementioned Forum document. The municipalities and their permit limits are listed below:

Permittee Name	Permit Number	Discharge Limitations	
Rock Springs, WY	WY0022357	*	
St. George, UT	UT0024686	1,960 mg/L	Daily Max
Ashley Valley, UT	UT0025348	800 mg/L	Daily Max
Olathe, CO	CO0020907	**	Quarterly

*The City of Rock Springs is considered to be in compliance with the requirements of the Colorado River Salinity Forum. The City provided written documentation that it was not able to meet the TDS limit.

**The City of Olathe, CO has been granted a waiver through 2018. They are required to monitor quarterly, but do not have a specified limit.

The City of Farmington considered these permit limits and its own historical TDS data in developing its request for relief. The requested incremental increase is also reasonable in light of several factors.

PUBLIC WORKS

The City has a number of uncontrollable sources that discharge to the system. It is not permissible to regulate water softener discharges due to legal restraints, yet the discharge from these softeners into the Farmington system is estimated to be nearing 100,000 pounds per month. Additional sources of salts included septage haulers (estimated at 14,100 pounds per month), chemicals required to treat the source water to drinking water standards, and, chemicals required to treat the wastewater to standards that meet both permit and water quality standards of the receiving stream. Even more importantly, the driver for the incremental increase limit on TDS is salinity. The gravimetric method for TDS measures a single number as total dissolved solids. The value, however, includes fixed TDS consisting mostly of salts, and volatile TDS which is chiefly colloidal material. The colloidal material contains very little salt and is organic in nature. Consequently, it does not contribute to the salinity of the receiving water. The colloids tend to be particles ranging from 0.01 μm to 2 μm and can contribute a very significant portion of the weight attributed to TDS. Testing of the Farmington wastewater effluent indicates the average colloidal portion of the gravimetric TDS is 89 mg/L. The release of colloids is likely already accounted for by the BOD₅ limit and should not be double accounted for in the TDS limit. Ideally, TDS limits in permits should specify "fixed" TDS which eliminates the colloidal fraction and is more applicable across a wide range of treatment plants and waste streams. The requested limit accounts for the colloidal fraction and also provides a reasonable factor for non-controllable salt discharges.

During discussions at the October 29th meeting, permitting staff commented that there are two means of calculating permit limits for TDS: a 30-day average using the 95th percentile value of previous data, and, a 99th percentile daily maximum value. Estimated permit limit values, based upon these criteria, were discussed. It is the City's belief that a daily maximum limit is consistent with the limits granted to other permittees, as noted in the Table above. Further, it is the City's belief that, by its nature, use of the daily maximum value is more protective of the river's ecosystem, downstream users of the river and of species indigenous to the river.

In addition to the TDS limit, the City expressed again its desire to return the intake sample point to its original location. A critical consideration in determination of the intake sample point is the City's current practice of drawing water directly from Animas River Pump Station #1 to Water Treatment Plant #1, April through October, as well as its ability to pump from Animas Pump Station #2 directly to the water treatment plants. Prior to the current permit, which became effective November 1, 2010, the permitted intake location was at the Animas River Pump Station #2 which typically pumps water from the Animas River to Farmington Lake. The lake was built to serve as a drinking water reservoir. Pretreatment of the raw water is realized in this basin, in that, detention within the basin reduces both suspended and dissolved solids as well as turbidity. The general wastewater permit for systems in Colorado reads:

Self-monitoring samples taken in compliance with the monitoring requirements specified above shall be taken prior to treatment of the raw drinking water source (with a composite sample proportioned to flow prepared from individual grab samples if more than one source is being utilized), and at the established domestic wastewater treatment plant effluent sampling point identified in the certification and in Part I.B of this permit. (Part I, page 5, Permit No. COG-589000)

It is the City's interpretation of the Forum document that the limit is to be based upon an incremental increase in the TDS concentration in the water removed from the river and not a secondary location such as Farmington Lake that provides treatment of the source of supply.

EPA staff commented on other issues in consideration of granting the City relief on the TDS permit, the most prominent being the impact of TDS concentrations on fish and downstream users. Calculations show the Farmington Wastewater Treatment Plant Effluent is a flow ratio of 0.008 of the San Juan River.

Using USGS conductivity data and Effluent TDS data converted to conductivity between November 2014 and September 2015, the data indicate the Effluent increases the TDS of the San Juan River by only 1.1 %.

The most notable downstream user of the river is the Navajo Nation. The limit proposed by the City of Farmington would not notably increase the salinity of the San Juan River, which is used by the Navajo Nation for irrigation purposes, and would still meet typical water quality standards for agricultural purposes. The City has contacted New Mexico Game and Fish and is encouraged that the 1.1% increase in TDS will not impact the river.

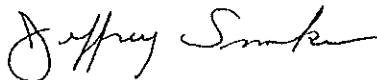
On a separate topic, it was mentioned during our meeting with the Agency that the renewed permit would include limits for total copper. We have reviewed the permit application and the data used to complete the application. From this review, it was noted that a decimal point had been misplaced, causing the copper data submitted as part of the application, to be erroneous. The February 2015 data point had been reported as 0.140 mg/L or 140 µg/L. The original laboratory data was checked and found to be 0.014 mg/L or 14 µg/L. As requested during a telephone conversation between Mr. Quang Nguyen and Monica Peterson of CH2M on November 9, 2015, the original and corrected data spreadsheets, along with a copy of the laboratory report with the February 2015 data and a corrected Form 2a, were e-mailed to him on November 9, 2015. Additionally, this information is attached to this addendum letter.

As explained in the conversation with Ms. Peterson, the data used for completion of the permit application was checked and verified but the decimal placement error occurred in the development of the last version of the spreadsheet which was submitted with the application. We apologize for the error and appreciate the opportunity to correct our submission.

Should a copper limit still be warranted after using the corrected data, we respectfully request that you provide the City with the rationale and basis for including the copper limit in the new permit.

In summary, we are confident that our request meets the requirements of Appendix B of the Colorado River Basin Salinity Control Forum as submitted. The TDS attainment of 400 mg/L limit is not practicable. We seek parody relief as provided others in the compact basin. The City requests a TDS permit limit incremental increase of 725 mg/L over the TDS concentration in the intake water to the water treatment plant.

Best regards,



Jeffrey Smaka, P.E.
Water Wastewater Administrator
City of Farmington
800 Municipal Drive
Farmington, NM 87401
Voice (505) 599-1283
Fax (505) 599-1299

cc: Program Manager, PSRS, NM Environment Department
Mr. Brent Larson, USEPA
Mr. Quang Nguyen, USEPA
Honorable Tommy Roberts, Mayor, City of Farmington
Rob Mayes, MA, MBA, ICMA-CM City of Farmington
David M. Sypher, P.E., City of Farmington
Ruben Salcido, City of Farmington
William F. Zimmerman, P. E., HDR
Dean Roquemore, CH2M
Monica Peterson, CH2M
Ron Rosen, CH2M
File

FACILITY NAME AND PERMIT NUMBER:

Farmington, Wastewater Treatment Plant - # NM0020583

Form Approved 1/14/99
OMB Number 2040-0086**SUPPLEMENTAL APPLICATION INFORMATION****PART D. EXPANDED EFFLUENT TESTING DATA**

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY	1.5	ug/L	0.0593	#/day	1.3	ug/L	0.0535	#/day	16	EPA 200.8	0.58
ARSENIC	1.2	ug/L	0.0520	#/day	1.100	ug/L	0.0495	#/day	25	EPA 200.8	0.36
BERYLLIUM	ND	ug/L	ND	#/day	ND	ug/L	ND	#/day	5	EPA 200.7	0.5
CADMIUM	ND	ug/L	ND	#/day	ND	ug/L	ND	#/day	46	EPA 200.7	0.61
CHROMIUM	ND	ug/L	ND	#/day	ND	ug/L	ND	#/day	50	EPA 200.7	2.8
COPPER	26	ug/l	0.9628	#/day	15.58	ug/L	0.6357	#/day	28	EPA 200.8	0.4
LEAD	ND	ug/L	ND	#/day	ND	ug/L	ND	#/day	34	EPA 200.8	0.26
MERCURY	0.0152	ug/L	0.0006	#/day	0.0076	ug/L	0.00032	#/day	37	EPA 245.7/1631e	0.001
NICKEL	3.2	ug/L	0.1268	#/day	2.20	ug/L	0.0929	#/day	28	EPA 200.7	0.3
SELENIUM	1.6	ug/L	0.0656	#/day	1.5	ug/L	0.0647	#/day	28	EPA 200.8	4
SILVER	1.2	ug/L	0.0457	#/day	1.2	ug/L	0.0457	#/day	26	EPA 200.7	0.48
THALLIUM	ND	ug/L	ND	#/day	ND	ug/L	ND	#/day	14	EPA 200.8	0.38
ZINC	52	ug/L	2.199	#/day	35.6	ug/L	1.473	#/day	49	EPA 200.7	10
CYANIDE	ND	mg/L	ND	#/day	ND	mg/L	ND	#/day	48	EPA 335.4	10
TOTAL PHENOLIC COMPOUNDS	ND	mg/L	ND	#/day	ND	mg/L	ND	#/day	16	SM 4500P F	50
HARDNESS (AS CaCO ₃)	353	mg/L	14072	#/day	346	mg/L	12963	#/day	3	HACH 8226/ SM 2340C	4
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											
ALUMINUM	130	ug/L	5.26	#/day	54	ug/L	2.269	#/day	32	EPA 200.7	11

PERMIT APP DATA - CORRECTED										
	MAX DAILY mg/L	MAX DAILY ug/L	MAX DAILY MASS (#/day)	AVERAGE mg/L	AVERAGE ug/L	AVERAGE MASS (#/day)	NUMBER OF ALL SAMPLES	(MAX) MDL mg/L	(MAX) MDL ug/L	NUMBER OF SAMPLE IN AVERAGES
COPPER	0.026	26	0.9628	0.015575	15.58	0.6357	28	0.0004	0.4	28

Jan. 2011 - Feb. 2015 Data